Therefore, in order for a claim to be anticipated by a reference, each and every limitation must be found in that reference. The Applicants respectfully submit that each and every claimed limitation is not found in the cited reference.

Independent claim 1, and claims 2-9 that depend therefrom, recite a composition having a plurality of distinct microbial species, where each constituent member of the composition is: (a) antagonistic against a plurality of microbial pathogens; (b) non-pathogenic towards plants and animals; (c) is tolerant of high temperatures; (d) grows rapidly; and (e) proliferates on a complex substrate. Accordingly, to anticipate claim 1 and the claims that depend therefrom, a reference must teach a microbial composition made-up of a plurality of distinct microbial species, each having every one of the above-described properties.

The Examiner contends that Reinbergen discloses a composition having a plurality of distinct microbial species wherein each constituent member is antagonistic against microbe pathogens, non-pathogenic toward plant and animals, tolerant of high temperatures, grows rapidly, and proliferates on a complex substrate. The Examiner points to the list of various microorganisms in the middle of page 5 of the reference as evidence that each microorganism of the Reinbergen composition possesses each of the claimed properties.

Reinbergen teaches a composition that includes microorganisms (abstract). Reinbergen also discloses exemplary microorganisms, i.e., bacteria, fungus and yeast, that may be included in the composition (page 5, lines 11-16; page 9, line 14 – page 10, line 5). Reinbergen also states that the composition may include a mixture of microorganisms. However, nowhere in the disclosure of Reinbergen is it taught that the composition is made-up of a plurality of microorganisms and that each microorganism that makes up the composition is antagonistic against microbe pathogens, non-pathogenic toward plant and animals, tolerant of high temperatures, grows rapidly, and proliferates on a complex substrate. The enclosed declaration by Dr. Yamashita demonstrates that it is known in the art that certain microorganisms taught by Reinbergen do not posses one or more of the claimed properties.

For example, Reinbergen teaches the use of *Saccharomyces cerevisiae*. However, it is known in the art that yeast species do not posses all of the claimed properties. Specifically, yeast species are not tolerant of high temperatures, which is a property claimed in claim 1.

Furthermore, the Applicant submits that, not only are yeast species taught by Reinbergen as exemplary microorganisms, but yeast species are preferred microorganisms in the compositions of Reinbergen. As evidence of such preferred use of yeast species in the compositions of Reinbergen, the Applicant directs the Examiner to the Examples section of Reinbergen. Accordingly, Example 1 teaches a solution 1 that includes the yeast species *Saccharomyces cerevisiae* (page 11, lines 15-16), a solution 2 that that includes the yeast species *Saccharomyces cerevisiae* (page 12, lines 1-2) and a solution 3 that includes the yeast species *Saccharomyces cerevisiae* (page 12, line 7). Likewise, Example 2 employs solutions that include the yeast solution of Example 1 (page 13, lines 8-9), and Example 4 teaches the use of the solution taught in Example 1, i.e., a solution that includes a yeast species. (Example 3 did not disclose the specific microorganisms in the composition.) Therefore, at least three of the four examples disclosed in Reinbergen teach compositions that include a yeast species and as such do not posses all of the claimed properties.

Various other microorganisms taught in Reinbergen are also known to lack one or more of the claimed properties. Specifically, certain strains of *E. herbicola* (page 9, lines 22-23) are known to cause freeze damage to plants, are pathogenic to plants and are not tolerant of high temperatures. Certain species of *Pseudomonas* (page 9, line23) are known to cause freeze damage in plants, are pathogenic to certain plants, are pathogenic to humans and are not tolerant of high temperatures. It is also known in the art that certain species of *Serratia* (page 9, line 28) are pathogenic to humans and are not tolerant of high temperatures. Certain species of *Agrobacterium* are known to be pathogenic to certain plants and are not tolerant of high temperatures. With respect to *Actinomyces* (page 9, line 29), certain species of *Actinomyces* are known to be pathogenic to plants and pathogenic to humans. It is also well known in the art that *Klebsiella* (page 9, line 28) does not tolerate high temperatures and that certain strains thereof are pathogenic to humans. It is also well known in the art that *Azobacter*, *Rhizobium*, *Azospirillium*, *Enterobacter*, *Arthrobacter* and *Aerobacter* (page 9, lines 27-29) do not tolerate high temperatures.

Accordingly, Reinbergen teaches a composition of microorganisms, where the microorganisms that make-up the composition may include yeast species and various other microorganism species that do not posses one or more of the following properties: antagonistic against microbe pathogens, non-pathogenic toward plant and animals, tolerant of high temperatures, grows rapidly, and proliferates on a

complex substrate, as claimed in claim 1. As such, Reinbergen does not teach all of the limitations of independent claim 1 and the claims that depend therefrom, namely a composition having a plurality of distinct microbial species, where each constituent member of the composition is: (a) antagonistic against a plurality of microbial pathogens; (b) non-pathogenic towards plants and animals; (c) is tolerant of high temperatures; (d) grows rapidly; and (e) proliferates on a complex substrate. Therefore, for at least the reasons described above, i.e., because Reinbergen does not teach each and every limitation of independent claim 1, and the claims that depend therefrom, the claims are not anticipated by Reinbergen.

Independent claim 10, and the claims that depend therefrom, have also been rejected as being anticipated by Reinbergen. Claim 10 recites a composition comprising a plurality of distinct microbial species made up of at least 5 different bacterial species and at least 2 different fungal species, wherein each constituent member is antagonistic against microbe pathogens, non-pathogenic toward plant and animals, tolerant of high temperatures, grows rapidly, and proliferates on a complex substrate.

As described above, in order for a reference to anticipate a claim, each and every limitation of the claim must be taught in the reference. The Applicant respectfully submits that the cited reference does not teach each and every claimed limitation.

As described above, Reinbergen teaches a composition that includes microorganisms and lists various microorganisms suitable for use. Reinbergen also states that mixtures of microorganisms may be employed. However, nowhere in the teachings of Reinbergen is it taught that the compositions must have at least 5 different bacterial species and at least 2 different fungal species. In fact, none of the specific examples of compositions taught in Reinbergen include at least 5 different bacterial species and at least 2 different fungal species.

Accordingly, Reinbergen fails to teach each and every claimed limitation, i.e., a composition that has at least 5 different bacterial species and at least 2 different fungal species, and therefore does not anticipate independent claim 10 and claims 11-12 that depend therefrom.

Independent claim 13 incorporated the composition of claim 1. Accordingly, for reasons analogous to those described above with respect to claim 1, The Applicant respectfully submits that Reinbergen does not anticipate claim 13 and respectfully requests that this rejection be withdrawn.

The Examiner has also rejected independent claim 14 and claims 17-19 that depend therefrom as being anticipated by Reinbergen. Independent claim 14 recites a method of producing a composition according to claim 1 that includes (a) identifying a plurality of microbial species that are (i) antagonistic against a plurality of microbial pathogens; (ii) non-pathogenic towards plants and animals; (iii) is tolerant of high temperatures; (iv) grows rapidly; and (v) proliferates on a complex substrate; and (b) combining the plurality to produce the composition of claim 1.

As described above, Reinbergen does not disclose the composition of claim 1 and as such does not disclose a method of producing a composition according to claim 1 that includes identifying a plurality of microbial species that have the claimed properties and combining the plurality.

Accordingly, Reinbergen fails to teach each and every claimed limitation, i.e., a method of producing a composition according to claim 1, and therefore does not anticipate independent claim 14 and claims 17-19 that depend therefrom.

REJECTION UNDER 35 U.S.C. §103

Claims 15 and 20 have been rejected under 35 USC §103 as being unpatentable over Reinbergen (W0 97/31879). The Applicant respectfully submits that claims 15 and 20 are not unpatentable under 35 U.S. C. §103 over Reinbergen.

The M.P.E.P. provides clear guidance on the requirements of a *prima facie* case of obviousness:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

M.P.E.P. § 2142.

Thus, the cited reference must teach or suggest all of the limitations of the claimed invention for the claimed invention to be rendered obvious over the reference. Claims 15 and 20 depend from claim 14. Accordingly, reasons analogous to those described above, i.e., Reinbergen fails to teach or even suggest a process for making the composition according to claim 1, a proper *prima facie* case of obvious can not be met. Accordingly, the Applicants respectfully request that the rejection of claims 15 and 20 under 35 U.S.C. §103(a) over Reinbergen be withdrawn.

The Examiner has also rejected claims 9 and 16 under 35 U.S.C. §103(a) as being unpatentable over Reinbergen in view of Kosanke et al. (US 5,695,541). The Applicant respectfully submits that claims 9 and 16 are not unpatentable under 35 U.S. C. §103 over Reinbergen in view of Kosanke et al.

A noted above, for a claim to be rendered obvious over a reference, the reference must teach or suggest all of the limitations of the claimed invention.

Claim 9 depends from claim 1 which recites a composition having a plurality of distinct microbial species, where each constituent member of the composition is: (a) antagonistic against a plurality of microbial pathogens; (b) non-pathogenic towards plants and animals; (c) is tolerant of high temperatures; (d) grows rapidly; and (e) proliferates on a complex substrate. As described above, Reinbergen does not teach or suggest such a composition. As Kosanke et al. is cited solely for growing microbes on complex substrates, Kosanke et al. fail to overcome the deficiencies of Reinbergen. Accordingly, the Applicant respectfully submits that a proper *prima facie* case of obvious can not be met. Accordingly, the Applicants respectfully request that the rejection of claim 9 under 35 U.S.C. §103(a) over Reinbergen in view of Kosanke et al. be withdrawn.

Claim 16 depends from claim 15. As described above, Reinbergen fails to teach or even suggest a process for making the composition according to claim 1. As Kosanke et al. is cited solely for growing microbes on complex substrates, Kosanke et al. fail to overcome the deficiencies of Reinbergen. Accordingly, the Applicant respectfully submits that a proper *prima facie* case of obvious can not be met. Accordingly, the Applicants respectfully request that the rejection of claim 16 under 35 U.S.C. §103(a) over Reinbergen in view of Kosanke et al. be withdrawn.

CONCLUSION

In view of the above amendments and remarks, this application is considered to be in good and proper form for allowance and the Examiner is respectfully requested to pass this application to issue.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-0815, reference no. YAMA-008.

Respectfully submitted,
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Date: 4.4.02

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